

-25-

**ABSTRACT OF THE DISCLOSURE**

A method for evaluating traffic dispersion at an exchange in a communications network, the exchange being arranged for applying a set of routing rules in allotting to a plurality of links (i.e., circuit groups) incoming traffic directed toward a given destination. The method includes the steps of incrementally generating traffic quantum representative of the traffic; producing a distribution of the traffic quantum over the circuit groups according to the set of routing rules; the distribution thus obtained being statistically representative of the dispersion of the incoming traffic over the plurality of circuit groups at the exchange. The steps of incrementally generating traffic quantum representative of the traffic and producing a distribution of the traffic quantum are performed in the absence of interference with operation of the exchanges/nodes in the communications network.